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FROM THE AUTHOR.

CLIMATE AND BRIGHT'S DISEASE.

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CLIMATE AND BRIGHT'S DISEASE.

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THE relation of climate to Bright's disease is twofold, causative and therapeutic.

All authorities are of accord as to the part played by cold and damp, and especially by sudden cold and damp, in the production of acute nephritis. The causal influence of vicissitudes of weather, and therefore of cold, damp, and changeable climates on the production of the subacute and chronic forms of nephritis, is less obvious. Bright's disease is peculiarly an affection of temperate climates, but when we take into consideration the importance properly assigned to modes of life, occupation, diet, alcohol, nervous influences, heredity, gout, and lead in its causation, we cannot but be impressed with the long-recognized fact that in whichever direction we leave the temperate zone we find a decided and rapid diminution in the frequency of this disease.

Hirsch calls attention to the infrequency of albuminuria in sub-tropical and in extreme northern countries. Dickinson, who has carefully investigated the subject, fully confirms this view from analysis of the statistics of the British Army Medical Reports for eight years from 1865 to 1872 inclusive. These statistics are of peculiar value, as they represent the frequency of renal affections in bodies of soldiers in every climate and at every season during the same period of time. The observations are drawn from considerable numbers of individuals of the same race, age, occupation, and habits, living under nearly similar conditions, under the observation of trained observers and with a uniform system of recording facts. They are perhaps vitiated to a certain extent by the effort which has been made to secure accuracy by eliminating from the conclusions the influence of syphilis. Dickinson

found that in British America, with its low average and great variability of temperature, renal disorders are nearly as frequent as in the United Kingdom. In Newfoundland, with its exceptionally humid climate, these disorders, so far as regards the limited number of troops there stationed, appear to be even more common than in the British Isles. With the higher temperature of New Zealand, renal disease becomes less frequent, and is least so on the subtropical shores and islands of the Mediterranean and in the solitary outposts of Mauritius and Bermuda, where a tropical or nearly tropical climate is tempered by a vast circumference of ocean. It is to be noted also that the Cape of Good Hope and St. Helena were comparatively free from renal affections. This accomplished observer also informs us that as the result of an analysis of the published registers of the causes of death, the comparatively cold cities of Great Britain and Australia show a remarkable liability to renal diseases. Paris, though not differing very much in temperature from the more fortunately situated of these cities, has a smaller proportion. Genoa, with its subtropical climate, has an almost complete exemption. He found that, in the year 1863, in England one death in 106 was due to this cause; in Scotland, one in 109; in Wales, one in 131. Of the several divisions of Scotland, in the mainland rural districts one death in 103, in the towns one death in 112, and in the insular rural districts one death in 188.

The Shetland Islands, with an almost arctic climate, enjoy an immunity from the disease not approached by any other part of the kingdom. It is further noted that within the limits of each kingdom, especially in Scotland, where the climatic differences are much more marked, there is a striking general correspondence between the amount of renal disease and the changeability of the climate. He found that in the Southern hemisphere exposure to a similar climate is attended with the same results. In Melbourne, with a mean temperature of 57°, renal affections are scarcely less common than in London. This appears from the results of general registration, while the mortality from kidney disease in the Melbourne City Hospital, one in thirteen, is much what occurs in similar institutions in England.

On passing the mean of 60° F., the frequency of renal diseases displays extraordinary diminution. "Renal diseases, putting aside that of lardaceous origin, are the compatriot of wheat and barley rather than of the vine and the olive. They abound wherever the climate, however cold during the winter, is warm enough in the summer, as in Canada, to bring wheat to perfection, and become scarce where oranges and lemons grow, and where deciduous trees, as gen-

erally characteristic of the scenery, are replaced by palms and other tropical endogens. In other words, they prevail wherever the heat for a considerable portion of the year is what would ordinarily be called temperate, as in Great Britain, or so for a large period of the year, as in British North America, where comparatively mild weather divides the year with continuous frost."

Dr Dickinson's researches further show that with tropical heat renal disease increases. They also confirm the opinion generally entertained, that the prevalence of these affections is promoted by frequent and abrupt changes. On the western coast of Scotland, where there is scarcely heat enough in summer to ripen wheat, but where the winters are warm from the influence of the Gulf Stream, so that a very uniform temperature prevails throughout the year, "renal disease is not half so frequent as on the eastern side of the kingdom, where the weather is both clearer and healthier than on the Atlantic shore, but undergoes much larger and more frequent variations."

The records on which these conclusion are based do not permit of a distinction between the acute inflammatory affections of the kidney and the more insidious and chronic forms of Bright's disease.

I am not aware that similar investigations on a large scale have been made in this country. Without doubt an analysis of the records of the great life insurance companies as regards the proportion of applicants rejected on account of Bright's disease and of deaths due to this cause, would shed much light not only upon the influence of climate, city, and rural life, occupation, and other important factors in the causation of this disease, but would also yield important facts in regard to the duration of the disease under varying circumstances.

Experience has abundantly proved that climate exerts an influence upon the course and duration of chronic forms of Bright's disease scarcely less important than in its causation. The concurrent testimony of all observers who have given their attention to the subject of the climatic treatment of Bright's disease, points to the salutary influence of prolonged residence in favorable subtropical regions, especially in cases where the disease has not yet made much progress. The late Professor Flint laid great stress upon the importance of a change of climate in chronic Bright's disease. You, yourself, Mr. President, have in your lectures and published writings emphasized it. Tyson and Purdy dwell upon it with a positiveness not found in the earlier writers. Dr. Dickinson goes so far as to say that

"The advantage to be expected from a change of sky is at least as great in renal as in pulmonary disease. Cure is a word to be used with caution,

but I have seen little less, the albumin reduced to a trace and perhaps that inconstant, and the general health brought up almost to its original level."

Dr. George Johnson writes :

"Among other remedial agencies, when acute renal disease is prolonged and threatens to become chronic, change of air and scene is often highly beneficial. Residence during the winter season in a warm, dry, equable climate, such as may be found at Cannes, Nice, Mentone, and Algiers, has in many instances, been attended with highly beneficial results. The bright warm sun and dry invigorating air, favor the action of the skin and of the bronchial mucous membrane; the patient is able to be much in the open air and thus the respiratory, the digestive, and the secretory functions are all assisted and promoted. I have seen some most remarkable recoveries effected under the influence of a long voyage after other means had failed to effect a cure."

On the other hand, the climatic treatment of Bright's disease seems to have been strangely overlooked by teachers of influence and authority. No reference is made to it in Bartel's article in Ziemssen's *Encyclopædia*, nor in that of Delafield in Pepper's *System*, nor in that of Grainger Stewart in Quain's *Dictionary*, recent works of reference on the shelves of practitioners; while in the text-books in the hands of medical students, references to the influence of climate in the causation and treatment of Bright's disease are rare and brief.

The most desirable climates are those which combine the attributes of evenness, dryness, and warmth, with a mean range of temperature between 60° and 65°. On the North American continent, a number of stations in the southern interior meet these indications. Among these are Thomasville and Tallahassee. The stations in the interior and on the Gulf coast of Florida are well suited to this class of patients. Southern California has several suitable stations. Nassau and Bermuda are to be recommended. The stations on the Mediterranean coast offer special advantages as winter resorts for patients suffering from chronic Bright's disease, while Algiers, Cairo, and the Cape of Good Hope are also favorably spoken of.

This paper would have occupied your considerate attention to little purpose, however, had it contained nothing beyond the familiar facts already mentioned. In availing ourselves of the advantages of the climate treatment of Bright's disease, we must not overlook the dangers of abrupt changes of climate and of the vicissitudes of travel in patients in whom the disease has already made some progress. It is with the view of eliciting discussion and obtaining the results of the experience of my colleagues in this Association that I submit certain conclu-

sions drawn from my own experience; and with the view of saving time, I venture to embody them in the form of the following propositions:

1. The best results of climate treatment in Bright's disease, as in phthisis, are obtained in the early stages of the affection, and by continuous residence. After the general health has become seriously impaired, an amelioration of the symptoms is all that can be hoped for. Alternations of climate, especially those necessitating long and fatiguing journeys by rail are attended with the danger of uræmia.
2. High altitude climates, even when presenting the conditions otherwise favorable, are unsuitable for this class of patients. Uræmic attacks and cardiac failure not infrequently shortly follow change of residence from low to high altitudes—differences of three thousand feet or more.
3. The conditions of North Atlantic steamship travel are often highly unfavorable to those suffering from advanced Bright's disease; especially is severe and prolonged sea-sickness liable, in these cases, to terminate in fatal uræmia.

